

CLAIMS

1. A method for validating detected code modulated signals transmitted by beacons of a positioning system and received by a receiver of said positioning system, which beacon signals are detected based on a correlation procedure performed between a respective given code for a specific beacon and received beacon signals, said method comprising:
  - 10 - performing measurements for said detected beacon signals;
  - selecting at least one of said detected beacon signals as a calibration signal;
  - determining at least one allowed range for results of measurements for detected beacon signals other than said calibration signal based on measurements for said detected calibration signal and on an available reference position of said receiver; and
  - rejecting each detection of a beacon signal for which results of performed measurements are outside of an allowed range determined for said measurements.
2. A method according to claim 1, wherein at least the detected beacon signal with the strongest signal level is selected as calibration signal.
3. A method according to claim 1, wherein said ranges are determined based in addition on orbit parameters available for said beacons.
4. A method according to claim 1, wherein said measurements for which a range is determined comprise at least a measurement of the code phase of the detected beacon signals.

5. A method according to claim 4, wherein said code phase is determined based at least on an information on the time of transmission of a respective detected beacon signal, which information is comprised as data in said beacon signals.
10. A method according to claim 4, wherein said code phase is determined based at least on a sub component of the time of transmission of a respective detected beacon signal, which sub component is obtained by detecting regularities in said received beacon signals.
15. A method according to claim 4, wherein a range is determined for said code phase by predicting a code phase based on the code phase of said calibration signal, on an available reference position of said receiver and on available orbit parameters, and by adding and subtracting a possible error in said prediction.
20. A method according to claim 1, wherein said measurements for which a range is determined comprise a measurement indicating a frequency shift in received beacon signals due to the relative velocity between the respective beacon and said receiver.
25. A method according to claim 1, wherein said detected beacon signals are detected in a tracking process.
30. 10. A receiver comprising
  - receiving means for receiving and detecting code modulated signals transmitted by beacons of a positioning system; and

- processing means for carrying out the method according to claim 1.
11. A receiver according to claim 10, which receiver is a  
5 GPS (Global Positioning system) receiver or a Galileo receiver.
12. An electronic device comprising a receiver according to  
claim 10.
- 10 13. An electronic device according to claim 12, wherein  
said electronic device is a mobile terminal capable of  
connecting to a network.
- 15 14. A device comprising
  - means for receiving from a receiver information on code modulated signals transmitted by beacons of a positioning system and received and detected by said receiver; and
  - processing means for carrying out the method according to claim 1.
- 20 15. A device according to claim 14, which device is a  
network element of a network.
- 25 16. A positioning system comprising
  - a receiver comprising means for receiving code modulated signals transmitted by beacons, and means for providing information on received code modulated beacon signals; and
  - a device according to claim 14.
- 30 17. A positioning system comprising
  - a receiver according to claim 10; and

- a device for providing assistance data to said receiver.
18. A positioning system according to claim 17, wherein
- 5       said device is a network element of a network.